Correspondence

The Editors will be pleased to receive and consider for publication correspondence containing information of interest to physicians or commenting on issues of the day. Letters ordinarily should not exceed 600 words and must be typewritten, double-spaced, and submitted in duplicate (the original typescript and one copy). Authors will be given the opportunity to review the editing of their correspondence before publication.

Human Immunodeficiency Virus Infection in Children Who Received Transfusions in Mexico

TO THE EDITOR: We report the cases of four children who received blood transfusions in Mexico and in whom human immunodeficiency virus (HIV) disease subsequently developed.

Summary of Cases

Patient 1 presented at 8 months of age with a history of chronic diarrhea, oral candidiasis resistant to therapy, failure to thrive, and hepatitis. She received approximately 20 ml of blood at 2 months of age for anemia and respiratory distress.

Patient 2 presented at 4 years of age with recurrent disseminated varicella-zoster. He also had a history of chronic diarrhea and a urinary tract infection. He received an unknown amount of blood in a transfusion for anemia at 6 months of age.

Patient 3 was seen initially at 4 years of age with stage IV Burkitt's lymphoma. He was in remission after chemotherapy and surgical therapy when a year later he had metastatic B-cell leukemic relapse. At the time of the progressive disease, the diagnosis of the acquired immunodeficiency syndrome (AIDS) was made. He had received a transfusion at 21 months of age for diarrhea and dehydration.

Patient 4 presented at 4½ years of age with chronic otitis media and mastoiditis, oral candidiasis, chronic diarrhea, herpetic gingivostomatitis, pneumonia, and a loss of a third of his previous weight over a three-month period. He had received a blood transfusion at 6 months of age for diarrhea and dehydration.

All four of these patients were transfused at different institutions in Guadalajara, Mexico (Osmar Matsui-Santana, MD, Instituto Regional de Investigacion en Salud Publica, Universidad de Guadalajara, written communication, December 1989) in 1986 and 1987 (patient 4). All the patients were documented infected by enzyme-linked immunosorbent assay (ELISA) and Western blot (patients 2, 3, and 4) or by direct HIV culture (patient 1). Each had significant immune function abnormalities at presentation, including reduced percentages of circulating $CD4^+$ "helper" T cells (range $<1\%$ to 29%) and hyperimmunoglobulinemia (patients 2, 3, and 4) or hypogammaglobulinemia (patient 1). The mothers of the patients were either negative for HIV antibody by ELISA (patients 2, 3, and 4) or had no other identifiable risk factors for AIDS (patient 1).

The routine screening of blood for the HIV antibody in the United States began in March 1985.[1] The chances of receiving an HIV-infected blood product here are small[2] and seem to be decreasing.[3] The odds are lower than for most other transfusion-associated complications.[4] This may not be the case in other countries, however. In many of the 152 countries that have reported at least one case of AIDS,[5] the screening of blood products began after March 1985 or has not yet begun at all.

As our four cases show, HIV testing should be considered in any person who was transfused in a country where the screening of all blood for HIV was not routine at the time of transfusion. The screening of blood for HIV was not instituted in Mexico until mid-1986, and private paid blood donor centers were not closed until 1987.[6] Up to 30% of paid blood donors at one center were positive for HIV antibody in Guadalajara during the same year these four children were transfused.[5]

The diagnosis of HIV infection may be delayed or overlooked entirely in children who have no other risk factors for AIDS than an apparently "safe" blood transfusion. As the development of AIDS or symptomatic HIV infection can occur as long as seven years or more following an infected transfusion,[7] one can expect additional transfusion-associated cases to present well into the mid 1990s from Mexico alone, perhaps later from other countries. Indeed, patient 4 was first seen in February of 1991. Furthermore, children infected from mothers who themselves were infected through blood transfusions after 1985 may present even further in the future.

When evaluating a patient for AIDS risk factors, physicians should ask for both the time and place of any transfusion. Patients planning foreign excursions should be advised about the safety of the blood supply in those particular locales.

RONALD M. FERDMAN, MD
JOSEPH A. CHURCH, MD
Division of Allergy-Clinical Immunology
Department of Pediatrics
Childrens Hospital of Los Angeles
University of Southern California
School of Medicine

LAURENE MASCOLA, MD
Los Angeles County Department of
Health Services

JUDITH K. SATO, MD
Division of Hematology-Oncology
Department of Pediatrics
Childrens Hospital of Los Angeles
University of Southern California
School of Medicine

PO Box 54700, Mail Stop #75
Los Angeles, CA 90054-0700

REFERENCES

1. Provisional Public Health Service inter-agency recommendations for screening donated blood and plasma for antibody to the virus causing acquired immunodeficiency syndrome. MMWR 1985; 34:1-5

2. Cumming PD, Wallace EL, Schorr JB, Dodd RY: Exposure of patients to human immunodeficiency virus through the transfusion of blood components that test antibody-negative. N Engl J Med 1989; 321:941-946

3. Mentove JE: The decreasing risk of transfusion-associated AIDS. N Engl J Med 1989; 321:966-968

4. Walker RD: Special report: Transfusion risks. Am J Clin Pathol 1987; 88:374-378

5. Sato PA, Chin J, Mann JM: Review of AIDS and HIV infection: Global epidemiology and statistics. AIDS 1989; 3 (Suppl 1):S301-S307

6. Vázquez-Valls E, Torres-Mendoza BM, Jáuregui-Ríos ML, Campos-López PI: Effect of the sanitary legislation against HIV in blood donations, in Guadalajara, Mexico. Salud Publica Mex 1990; 32:38-42

7. Ward JW, Bush TJ, Perkins HA, et al: The natural history of transfusion-associated infection with human immunodeficiency virus—Factors influencing the rate of progression to disease. N Engl J Med 1989; 321:947-952